

1. Set up your apparatus like the demonstration one shown on the front counter.
2. Be sure that you tape down the paper and that your ruler edge is on the edge of the paper.
3. Please make sure that your plastic cup is set up at the very end of the ruler.
4. This time you will use the plastic cup with the door in it. The opening should be at the end of the ruler.
5. Place one marble at the top of the ruler ramp and let it go.
6. Using one marker, trace around the cup onto the white paper wherever it lands.
7. Do this 4 more times (a total of 5 trials). Remember to reset your cup at the end of the ruler after each trial.
8. Now repeat this experiment 5 times with 3 marbles. Be sure to use a new color of marker.
9. Repeat this experiment again 5 times with 4 marbles. Be sure to use a new color of marker.

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| # of Marbles | Distance  Trial 1 (cm) | Distance  Trial 2 (cm) | Distance  Trial 3 (cm) | Distance  Trial 4 (cm) | Distance  Trial 5 (cm) |
| 1 |  |  |  |  |  |
| 3 |  |  |  |  |  |
| 4 |  |  |  |  |  |

Question 1: How did the increased mass (more marbles), affect the cup’s tendency to move?